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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,351	02/28/2005	Lian Hui Zhang	2977-154	6085

6449 7590 07/11/2005

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EXAMINER

CHOWDHURY, IQBAL HOSSAIN

ART UNIT PAPER NUMBER

1652

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/502,351	ZHANG ET AL.	
	Examiner	Art Unit	
	Iqbal Chowdhury, Ph.D.	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-17 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-2, drawn to a composition comprising an isolated nucleic acid of N-acyl homoserine lactone (AHL) acylase or N-acyl homoserine lactonase.

Group II, claim(s) 3-7, drawn to isolated polypeptide of N-acyl homoserine lactone (AHL) acylase or N-acyl homoserine lactonase.

Group III, claim(s) 8, drawn to method of modulating AHL signaling by AHL-acylase or N-acyl homoserine lactonase.

Group IV, claim(s) 11-12, drawn to method of use of polypeptide for controlling bacterial disease in humans.

Group V, claim(s) 13, drawn to method of use of polypeptide for controlling bacterial disease in plants.

Group VI, claims 14-15, drawn to method of use of nucleic acid for controlling bacterial disease in mammals.

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Group VII, claims 16-17, drawn to method of using nucleic acid for controlling bacterial disease in plants.

Group VIII, claim(s) 9, drawn to a transgenic plant harboring a nucleic acid of N-acyl homoserine lactone (AHL) acylase.

Group IX, claim(s) 10, drawn to a transgenic animal harboring a nucleic acid N-acyl homoserine lactone (AHL) acylase.

2. The inventions listed as Groups I - IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The polynucleotide encoding N-acyl homoserine lactone acylase (Ahl-acylase) or N-acyl homoserine lactonase of Group I and polypeptide N-acyl homoserine lactone acylase (Ahl-acylase) or N-acyl homoserine lactonase of Group II are each unrelated and chemically distinct entities. The only shared technical feature of these groups is that they all relate to polypeptide N-acyl homoserine lactone acylase (Ahl-acylase) or N-acyl homoserine lactonase. However, this shared technical feature is not a "special technical feature" as defined by PCT Rule 13.2 as it does not define a contribution over the art. Dong et al. (PNAS 97, p3526-3531, 2000 and Nature 411, p813-817, 2001) teach polypeptide N-acyl homoserine lactone acylase (Ahl-acylase) or N-acyl homoserine lactonase.

3. The methods of Groups III-V do not share any "special technical feature" with Group I as the polynucleotides of Group I are neither made nor used by the methods of groups III-V. The methods of Groups III-V do not have unity of invention with each other as each methods comprises unrelated steps, and produce different effects.

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4. The transgenic plant of Group VIII and polypeptide of group II are unrelated and completely different entity. The special technical feature of Group VIII is transgenic plant and the special technical feature of Group II is polypeptide Ahl-acylase. The transgenic plant of Group IV is neither made nor used by the polypeptide of Group II.

5. The transgenic animal of Group IX and polypeptide of group II are unrelated and completely unrelated entity. The special technical feature of Group IX is transgenic animal and the special technical feature of Group II is polypeptide Ahl-acylase. The transgenic animal of Group IX is neither made nor used by the polypeptide of Group II.

6. The methods of Groups III-VII are patentably distinct as they comprise unrelated steps, use different products and produce different effects.

Furthermore, 37 CFR 1.475 does not provide for multiple products and/or methods within a single application. Therefore, inventions of Group I - IX lack unity of invention.

A telephone call was made to Martha Cassidy on 07/06/2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iqbal Chowdhury, Ph.D. whose telephone number is 571-272-8137. The examiner can normally be reached on 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 703-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Iqbal Chowdhury, Ph.D., Patent Examiner
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